

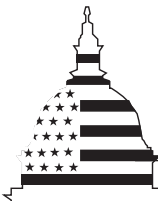
GAO

Report to the Chairman, Subcommittee  
on Readiness and Management  
Support, Committee on Armed  
Services, U.S. Senate

April 2001

# DEFENSE LOGISTICS

## Unfinished Actions Limit Reliability of the Munition Requirements Determination Process



G A O

Accountability \* Integrity \* Reliability

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<b>Abstract</b> The military services budget for conventional munitions 1 is about \$4.2 billion in fiscal year 2001 and is projected to increase annually until fiscal year 2005 when the budget is expected to be about \$5.4 billion. To determine the number and type of munitions needed, the services annually evaluate their munition requirements using a multiphase analytical process. The accuracy of this process is critical as its outcome defines the numbers and types of munitions necessary to defeat potential threats; affects munitions planning, programming, and budgeting decisions; and influences industrial production base decisions. Since 1994, the Department of Defense Inspector General has issued 17 reports and we have issued 3 reports identifying weaknesses and expressing concerns about the accuracy of the process used by the Department of Defense to determine these requirements. The Department of Defense has acknowledged the weaknesses and is working to achieve a more accurate process for determining these requirements.		
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United States General Accounting Office  
Washington, DC 20548

April 5, 2001

The Honorable James M. Inhofe  
Chairman, Subcommittee on Readiness  
and Management Support  
Committee on Armed Services  
United States Senate

Dear Mr. Chairman:

The military services' budget for conventional munitions<sup>1</sup> is about \$4.2 billion in fiscal year 2001 and is projected to increase annually until fiscal year 2005 when the budget is expected to be about \$5.4 billion. To determine the number and type of munitions needed, the services annually evaluate their munition requirements using a multiphase analytical process. The accuracy of this process is critical as its outcome defines the numbers and types of munitions necessary to defeat potential threats; affects munitions planning, programming, and budgeting decisions; and influences industrial production base decisions. Since 1994, the Department of Defense Inspector General has issued 17 reports and we have issued 3 reports identifying weaknesses and expressing concerns about the accuracy of the process used by the Department of Defense to determine these requirements. The Department of Defense has acknowledged the weaknesses and is working to achieve a more accurate process for determining these requirements.

As requested, we assessed the Department of Defense's progress in improving the requirement determination process. Specifically, this report addresses (1) the extent to which actions have been taken to improve the process and (2) those areas where additional actions are needed. The scope and methodology of our work are described in appendix I. This is the second in a series of reports that addresses ammunition management issues.<sup>2</sup>

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<sup>1</sup> Conventional munitions are nonnuclear ammunition or ordnance, including rockets, missiles projectiles, and bombs required by a given force structure to neutralize a threat.

<sup>2</sup> *Defense Management: Army Could Achieve Efficiencies by Consolidating Ammunition Management* (GAO/NSIAD-99-230, Sept. 30, 1999).

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## Results in Brief

The Department of Defense is improving the munition procurement requirement determination process. Improvements are being implemented to correct weaknesses in the process that could result in over or understated requirements. Improvements include coordinating the threat assessment, updating projections about the amount of time it would take a potential enemy to repair and return damaged targets to the battlefield and damage assessments for input into the services' battle simulation models, modifying the target allocation process, and making a more comprehensive risk assessment—all important components of the requirement determination process.

Notwithstanding the above improvements, uncertainties remain about the process's reliability because of actions to be completed and other issues that are still under deliberation. The Department has yet to complete a database providing detailed descriptions of the types of targets on large enemy installations that would likely be encountered based on warfighting scenarios; information the services and warfighting Commanders in Chief<sup>3</sup> also need in order to make accurate munitions decisions. And although the Department has provided \$34 million to update its munitions effectiveness database, it has not set a time frame for completing the update. Finally, the Department is debating whether (1) to include greater specificity in its warfighting scenarios and (2) to rate the warfighting scenarios by the probability of their occurrence.<sup>4</sup> These process components significantly affect the numbers and types of munitions needed to meet the warfighting Commanders in Chief's objectives. Until the Department completes all of these improvements and fully incorporates them into the requirement determination process, concerns about the reliability of the process will remain and could adversely affect munitions planning, programming, budgeting, and industrial production base decisions.

This report recommends that the Secretary of Defense direct the Under Secretary of Defense for Acquisition, Technology and Logistics take the lead in establishing a plan for resolving the outstanding issues. Such a plan should include time frames for resolving the outstanding issues, metrics

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<sup>3</sup> The Commander in Chief is the senior U.S. military officer of the Unified Combatant Command. The Unified Combatant Command is composed of forces from two or more military services, has broad and continuing missions, and is normally organized on a geographical basis. There are currently nine Unified Combatant Commands.

<sup>4</sup> These scenarios present conditions that may exist during the conduct of two major theaters of war.

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for measuring progress, and milestones for implementing the proposed changes. The Department concurred with the report and outlined actions it has underway addressing all aspects of the report's recommendations.

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## Background

The military services annually determine their current and future munition procurement requirements in accordance with the Defense Planning Guidance.<sup>5</sup> Historically, the Defense Planning Guidance has directed the military services to arm a given force structure to win two nearly simultaneous major theaters of war. In recent years, the Department of Defense has engaged in a number of military operations that vary in size and circumstance from a major theater of war; consequently, the current National Military Strategy<sup>6</sup> and the Defense Planning Guidance call for the services to prepare for a number of small-scale contingency<sup>7</sup> operations in addition to the two major theaters of war.

The conditions under which small-scale operations are fought may differ from conditions in a major theater war, which may increase the services' requirements for highly technical precision munitions<sup>8</sup> designed to limit loss of life and expensive military assets. The increased use of precision munitions in recent conflicts reduced inventories and raised questions about whether adequate attention had been paid to the impact of small-scale contingencies on the ability of U.S. forces to respond and sustain operations for the two major theaters of war. Of the approximately \$4.2 billion of munitions the services are planning to procure in fiscal year 2001, 46 percent (or \$1.9 billion) will be used to procure precision munitions designed to reduce the number of conventional munitions

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<sup>5</sup> The Secretary of Defense and his staff prepare the Defense Planning Guidance, issue policy, and articulate strategic objectives that reflect the National Military Strategy. It includes the Secretary of Defense's force and resource guidance to the military departments, other combat support agencies and the unified commands.

<sup>6</sup> The National Military Strategy provides the advice of the Chairman of the Joint Chiefs of Staff on the strategic direction of the Armed Forces over the next 3 to 5 years.

<sup>7</sup> Small-scale contingencies include, among other operations, peacekeeping operations, humanitarian relief and evacuations, monitoring and enforcing cease-fires, and other arrangements designed to separate parties recently in conflict.

<sup>8</sup> Precision munitions refer both to guided and smart munitions. Guided munitions are one-on-one munitions—one munition for one target—that are guided to their target through a targeted acquisition sensor or laser designation system. Smart munitions are “fire and forget” and have an autonomous capability to search, detect, classify, select, and engage targets with a lethal mechanism.

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needed to defeat enemy targets while at the same time limiting loss of expensive weapons systems and life. By fiscal year 2005, the services are planning to increase their procurement of precision guided munitions by about 5 percent.

## Requirements Process

In 1994, to generate consistent munition requirements Department-wide, and to ensure that the military services have both an adequate supply and the appropriate types of munitions to address changing mission needs, the Department of Defense standardized the process by which the services determine their munition requirements. In 1997, the Department of Defense issued Instruction 3000.4, which sets forth policies, roles and responsibilities, time frames, and procedures to guide the services as they develop their munition requirements. This instruction is referred to as the Capabilities-Based Munitions Requirements process and is the responsibility of the Under Secretary of Defense for Acquisition, Technology and Logistics.

The instruction describes a multiphased analytical process that begins when the Under Secretary of Defense for Policy develops, in consultation with the Chairman of the Joint Chiefs of Staff, the military services, and the warfighting Commanders in Chief, policy on munition requirements for the Defense Planning Guidance. The Defense Intelligence Agency uses the Defense Planning Guidance and its accompanying warfighting scenarios as well as other intelligence information to develop a threat assessment. This assessment contains estimates and facts about the potential threats that the United States and allied forces could expect to meet for each of the two major theaters of war scenarios. The warfighting Commanders in Chief, responsible for the major theaters of war scenarios, in coordination with the Joint Chiefs of Staff, use the threat assessment to allocate each service a share of the identified targets by phases of the war.

Next, the services develop their combat requirements using battle simulation models and scenarios to determine the number and mix of munitions needed to meet the Commanders in Chief's objectives separately by each major theater of war scenario. To develop these requirements, the services draw upon and integrate data and assumptions from the Defense Planning Guidance requirements, warfighting scenarios, and target allocations, as well as estimates of repair and return rates for enemy targets and projected assessments of damage to enemy targets and installations. Other munition requirements include munitions (1) needed for forces not committed to support combat operations, (2) to provide a post-major theater of war combat capability, and (3) to train the force,



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support service programs, and peacetime requirements. These requirements, in addition to the combat requirement, comprise the services' total munitions requirement. The total munitions requirement is then balanced along with projected inventory and affordability to determine how many of each munition the services will procure within their specified funding limits and used to develop the services' Program Objectives Memorandum<sup>9</sup> and Presidential budget submission.

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## Prior Audits Note Problems

Despite Department efforts to standardize the process and generate consistent requirements, many questions have been raised about the accuracy or reliability of the requirements determination process. Between the Department of Defense Inspector General and our agency, 20 reports have been issued that state that systemic problems — such as questionable and inconsistently applied data, inconsistency of processes among and between services, and unclear guidance — have inflated the services' requirements for certain categories of munitions. A list of these reports is included in appendix II. The Department acknowledged these weaknesses and recognized that inflated requirements can negatively affect munitions planning, programming, and budget decisions, as well as assessments of the size and composition of the industrial production base. As a result, the Defense Planning Guidance for fiscal years 2000-2005, dated April 1998, directed that a Capabilities-Based Munitions Requirements working group<sup>10</sup> develop recommendations to improve the accuracy of the process. In October 1998, the group recommended several corrective actions to address weaknesses identified by both the Inspector General and our agency.

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<sup>9</sup> A Program Objectives Memorandum details the specific forces and programs that the service proposes over the 6 year Future Years Defense Plan period to meet the military requirements identified in the planning guidance within the financial limits that are mandated by the Secretary of Defense.

<sup>10</sup> Representatives from the Office of Program Analysis and Evaluation, the Office of the Secretary of Defense for Policy and Requirements and Plans, the Joint Staff, the Combatant Commands, the Defense Intelligence Agency, and the military services make up the Capabilities-Based Munitions Requirements working group.

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## Actions Being Taken to Improve the Process

- Coordinated threat assessment
- Revised repair rates for damaged targets and target damage assessments
- Modified the target allocation process
- Revised risk assessments

Based on the recommendations of the Capabilities-Based Munitions Requirements working group, the Department has improved several key components of the requirements determination process. Process improvements include Department-wide coordination of the threat assessment, updated projections as to the amount of time it takes a potential enemy to repair and return damaged targets to the battlefield and target damage assessments, modifications to the target allocation process, and a risk assessment that includes the impact of small-scale contingency operations. The Department expects these improvements to correct weaknesses in the process that can result in over- or understated munition requirements.

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## Coordinated Threat Assessment

The Defense Intelligence Agency develops an annual threat assessment that identifies potential threats that the United States and allied forces could expect to meet for each of the two major theaters of war scenarios. The Capabilities-Based Munitions Requirements instruction directs that the Commanders in Chief and the Joint Chiefs of Staff use the threat assessment to allocate targets to each of the services. The Department has identified weaknesses in this area and taken steps to strengthen this assessment.

Defense Intelligence Agency officials stated that in the past, the services could, based on input from their own intelligence sources or direction from the warfighting Commanders in Chief, develop an independent threat analysis that could result in the services planning to destroy the same targets and, consequently, overstating munitions requirements. To resolve this issue, the working group directed that the Defense Intelligence Agency fully coordinate the threat assessment with the services and throughout the Defense intelligence communities. In accordance with this directive, the Defense Intelligence Agency coordinated the most recent threat assessment that describes the threat for the fiscal year 2002-2007 planning cycle. By adopting a coordinated threat assessment, the Department expects to be better able to ensure that the services' munition requirements will be more accurate.

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## Revised Repair Rates and Assessments

Repair rates are a projection of the amount of time it takes a potential enemy to repair and return a target to the battlefield and determine the number of attacks needed to destroy a target, which directly influences munition quantities. Since the services use these rates as input into their warfighting simulation models to determine their munition requirements, these rates should be current and reflect a country's existing repair capability. In response to a Department of Defense Inspector General review of this process, the Department has taken steps to address the quality of its data on projected repair rates.

A Department of Defense Inspector General audit<sup>11</sup> of service requirements for specific categories of munitions reported that the services used repair rates that overstated the requirement for these munitions. According to an official from the Joint Staff, the services were using repair rates for countries from the Cold War era that were able to repair and return damaged property to the battle more quickly than could countries used in today's war planning scenarios. To address this issue, in December 1999, the Defense Intelligence Agency updated and standardized the repair rates the services used in their battle simulation models, and the Department expects these actions will address the issue of overstated requirements.

Battle damage assessments are more critical to munitions requirement planning with the increased use of precision guided munitions and changes in warfighting. Previously, munitions were fired from a range that allowed a visual damage assessment, but precision guided munitions are often fired miles from the target, which eliminates the ability to visually assess whether the target has been damaged or destroyed. Knowing in advance the probability that a specific munition will destroy the target is necessary to accurately determine the number and mix of munitions that will be required.

To improve battle damage assessments, the Defense Intelligence Agency developed battle damage assessment factors that measure (1) whether a target was hit, (2) the extent of the damage, and (3) whether the objective was met. These factors are more predictive if the munition has a guidance system that provides damage information to the launch site. According to a Navy official, using the newly developed battle damage assessment

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<sup>11</sup> *Summary of the DOD Process for Developing Quantitative Munitions Requirements*, Department of Defense Inspector General, Feb. 24, 2000.

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## Improved Target Allocation Process

factors for the fiscal year 2002-2007 requirements planning cycle significantly reduced the requirement for certain categories of naval munitions. According to an official from the Joint Staff, these assessments have also reduced the potential for overstated munition requirements for the services' air components.

Allocating targets to the services is one of the most critical steps in the requirement determination process as it defines the services' role in the war fight and determines the number and type of munitions for which the services need to plan. In accordance with the Capabilities-Based Munitions Requirements instruction, the warfighting Commanders in Chief are required to allocate targets to the services for their area of responsibility. This is an area that has proven problematic in reaching an agreement among the services, but the Joint Chiefs of Staff have provided direction to strengthen the process.

In response to a Department of Defense Inspector General audit<sup>12</sup> critical of the Central Command's allocation process, a 1999 pilot project was initiated that transferred the U.S. Central Command's target allocation role to the Joint Chiefs of Staff who, in coordination with the services, developed a methodology to allocate targets. According to officials at the Joint Staff and the Central Command, the methodology was intended to better align the Commanders in Chief's near-term objectives (which generally cover a 2-year period) and the services' long-term planning horizon (which is generally 6 years). Another benefit of the pilot was that the Joint Staff could validate the services' munition requirements by matching requirements to target allocations.

The Army, the Navy, and a warfighting Commander in Chief objected to the pilot's results and criticized the methodology used to allocate the targets because it allocated significantly more targets to the Air Force and fewer targets to the Army. Army officials objected that the methodology did not adequately address land warfare, which is significantly different than air warfare.<sup>13</sup> The Navy did not concur with the results, citing the lack

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<sup>12</sup> *Threat Distributions for Requirements Planning at U.S. Central Command and U.S. Forces Korea*, Department of Defense Inspector General, May 20, 1998.

<sup>13</sup> The Army's position was that unlike the air services that plan munition requirements to destroy assigned targets, assigning specific targets to a land battle is meaningless as the number of targets destroyed may not be an accurate measure of a successful operation. Specifically, in a land battle, circumventing the enemy or surrounding them and cutting off their supply lines may meet the Commander in Chief's operational plan.

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of recognition for the advanced capabilities of future munitions. U. S. Central Command officials disagreed with the results, stating that a change in methodology should not in and of itself cause the allocation to shift. In July 2000, citing substantial concerns about the pilot, the Under Secretary of Defense, Acquisition and Technology suspended the target allocation for fiscal year 2000 and directed that the services use the same allocations applied to the fiscal year 2002-2007 Program Objectives Memorandum.

In August 2000, the Joint Chiefs of Staff structurally changed the threat allocation process to address the services' and the warfighting Commander in Chief's objections. The warfighting Commanders in Chief will now prepare a near-term target allocation using a methodology developed by the Joint Chiefs. Each warfighting Commander in Chief will develop two allocations—one for strike (air services) forces and one for engagement (land troops) forces for his area of responsibility. The first will allocate specific targets to strike forces under the assumption that the air services can eliminate the majority of enemy targets. The second allocation will assume that less than perfect conditions exist (such as bad weather), which will limit the air services' ability to destroy their assigned targets and require that the engagement force complete the mission. The Commanders in Chief will not assign specific targets to the engagement forces, but they will estimate the size of the expected remaining enemy land force. The Army and the Marines will then be expected to arm themselves to defeat those enemy forces. The Joint Staff will use the Commanders in Chief's near-year threat distribution and extrapolate that information to the last year of the Program Objectives Memorandum for the purpose of the services' munitions requirement planning. The Department expects that these modifications should correct over- or understated requirements and bridge the gap between the warfighting Commanders in Chief's near-term interest and objectives and the services' longer planning horizon.

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## Department Is Making Its Risk Assessment More Comprehensive

Until recently, the Department lacked an assessment of the impact of small-scale contingencies on munition requirements, and uncertainties existed regarding the impact on service abilities to meet the requirements of the two major theaters of war. However, the Department has taken action to better address this issue.

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In October 1999, the Joint Requirements Oversight Council<sup>14</sup> directed that the Joint Staff coordinate an assessment of the risk associated with current and projected munition inventories available for two major theaters of war and inventories depleted by a challenging sequence of small-scale contingency operations. According to an official from the Joint Chiefs of Staff, the increased use of precision guided munitions during the contingency operation in Kosovo<sup>15</sup> prompted several Department studies that addressed whether the military services have sufficient munitions to fulfill the two major theaters of war requirement. However, initial studies focused on the difference between the services' two theaters of war requirement and the actual number of munitions procured, but did not demonstrate the impact of shortfalls of specific munitions on the services ability to respond to two major theaters of war.

The assessment, completed in April 2000, which focused on inventories of precision guided munitions, concluded that small-scale contingencies would have a negligible impact on the Commanders in Chief's ability to meet the two major theaters of war requirement. An official from the Joint Staff stated that the study's conclusion was based on the assumption that in a major theater war, precision guided munitions might be used during the early phases of the war for critical targets and then other, less accurate munitions could be substituted. However, according to an Air Force official, the assessment did show that small-scale contingency operations negatively affect inventories of some precision munitions, which may limit the Commanders in Chief's flexibility in conducting two major theater wars. Department officials added that the assessment should give the services information they need to plan for inventories of specific munitions that would be affected more than others during contingency operations.

The Department is incorporating the actions that have been taken to improve the process into a revised Capabilities-Based Munitions

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<sup>14</sup> The Joint Requirements Oversight Council was formed over a decade ago to make decisions about what mix of weapons is required to meet future threats and to ensure against program duplication by the services. The Council is composed of the Vice Chairman, Joint Chiefs of Staff; the Vice Chief of Staff, U.S. Army; the Vice Chief of Staff, U.S. Air Force; the Vice Chief of Naval Operations; and the Assistant Commandant, U.S. Marine Corps.

<sup>15</sup> While Kosovo is characterized as a contingency operation, Air Force officials have stated that Kosovo stressed Air Force resources, based on the number of missions flown, much like a major theater of war.

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Requirements instruction that it expects to issue in the spring 2001 and to be used to determine the services' fiscal year 2004-2009 requirements.

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## Unresolved Issues Affect Reliability of Munition Requirements Process

- List of targets
- Munitions effectiveness data
- Warfighting scenarios

Notwithstanding the corrective actions the Department has taken or has underway to improve the process, other key components have either not been completed or not been decided upon. The Department has not completed a database listing detailed target characteristics for large enemy installations based on warfighting scenarios and has not developed new munitions effectiveness data to address deficiencies the services and the Commanders in Chief have identified. Completion dates for these tasks have been exceeded or not established. Additionally, the Department has not determined whether to create more detailed warfighting scenarios in the Defense Planning Guidance or to rate scenarios in terms of their probability. Such an action could increase reliability of the requirement determination process and ensure consistency in the services' analyses in support of their requirements. The Department is in the process of incorporating the completed actions into a revised Capabilities-Based Munitions Requirements instruction to be issued in the spring 2001 and used by the services to determine their fiscal year 2004-2009 munitions procurement requirements. However, the Department has no clear plan of action for resolving these issues or a time frame for their completion. Until the remaining tasks are completed and incorporated into the process, questions are likely to remain regarding the accuracy of the munition requirements process as well as the Department's ability to identify munitions most appropriate to defeat potential threats.

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### List of Targets Is Overdue

According to Department officials, the Department lacks a common picture of the number and types of targets on large enemy installations as identified in the warfighting scenarios and as a result, the services have been identifying targets on enemy installations differently. According to an official from the Joint Staff, the Department has been concerned that this lack of common target characteristics could over- or understate requirements for certain munition categories. To resolve this issue, the Joint Chiefs instructed the Defense Intelligence Agency, in coordination with the warfighting Commanders in Chief, to develop target templates

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that would provide a common picture of the types of potential targets on enemy installations. According to Defense Intelligence Agency officials, the services and the Commanders in Chief could also use this information to attack these targets with munitions that would minimize damage to the installation, reduce reconstruction costs after a conflict, and allow U.S. forces to use it if needed. An official from the Joint Staff stated that while the Defense Intelligence Agency was to complete the target templates by August 31, 2000, it has yet to do so and a specific completion date has not been established.

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#### Munitions Effectiveness Data Not Yet Updated

How effective a munition is against a target can predict the number of munitions necessary to defeat it. According to an official at the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, funding to maintain the manual containing this information has historically been limited. The Department recognizes that munitions effectiveness data is a critical component for requirements planning and that outdated information could over- or understate munition requirements. To address this shortfall, the Department provided \$34 million in fiscal year 2001 to update and publish munitions effectiveness data for use by the services in their battle simulation models. At the time of our review, the Department did not know when this project would be completed.

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#### Department Undecided on Specificity Needed in Warfighting Scenarios

The Defense Planning Guidance contains an appendix of warfighting scenarios that detail conditions that may exist during the conduct of the two major theaters of war; these scenarios are developed with input from several sources, including the Defense Intelligence Agency, the Joint Staff, and the services. This appendix provides a common base line from which the services determine their munition requirements. However, according to several Department officials, the warfighting scenarios in the Defense Planning Guidance need to include more detail. Specifically, these officials stated that information about the potential constraints under which the war will be fought and casualty and asset loss guidance can affect the types and numbers of munitions the services plan to procure. Some Department officials stated that the Defense Planning Guidance used to contain specifics on the conduct of the war fight; however, when the Department adopted the Capabilities-Based Munitions Requirements instruction, the detail was eliminated in favor of broader guidance.

Conversely, other Department officials disagree with the need for increased guidance. According to an official from the Office of Secretary of Defense, Requirements and Plans, additional guidance and specificity is



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not necessary because the services should use the scenarios in the Defense Planning Guidance to plan their force structure rather than their munition requirements. Some Air Force and Army officials agree, stating that the Defense Planning Guidance provides sufficient guidance for munition planning for the mandatory two major theaters of war scenarios. The chief of the Army Combat Support War Reserve Branch suggested that specific guidance would only be necessary if the Army was required to plan for small-scale contingencies with restrictions on the conduct of the war fight. However, according to some Department officials, while the Defense Planning Guidance provides the services a basis for their force structure, it is also an integral part of the requirements determination process. From this vantage point, Department officials suggest that if small-scale contingency operations are becoming a part of an overall military strategy then the Defense Planning Guidance should reflect this by incorporating more detailed guidance on the conduct of such operations. By providing additional guidance on the conduct of the war fight, such as limiting loss of weapon systems and lives, the services would be better able to plan their munition requirements to ensure the stated conditions were met.

In addition to lacking sufficient specificity on warfighting scenarios, the Defense Planning Guidance does not rank the scenarios by the probability of their occurrence. In 1998, we reported that the services were using the warfighting scenario that supported additional requirements for specific munitions. In addition, the requirement for a specific Army munition was inflated partly because the Army disregarded the Defense Planning Guidance scenarios and instead used two scenarios it had developed independently. Consequently, the requirement for the munition was tripled and the Army's justification for the requirement was inconsistent with the Commander in Chief's objectives and the Army's doctrine.

To ensure that the services plan for the most likely scenario in the Defense Planning Guidance and not use unlikely events to support certain munitions, the Capabilities-Based Munitions Requirements working group requested that the Defense Intelligence Agency develop probability factors for the various warfighting scenarios. While the Defense Intelligence Agency has developed these factors, at the time of our review, the Department was still debating whether to prioritize the scenarios.

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## Conclusion

The Department is working to ensure that the requirements determination process results in accurate numbers and types of munitions necessary to defeat threats as specified in the Defense Planning Guidance. While the

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Department has made progress and has identified specific areas still requiring attention, there is no clear plan with time frames for resolving key issues. Some of these issues have only been partially completed and others are in the early stages of evolution. Specifically, target templates have not been completed and munitions effectiveness data has not been updated, nor have decisions been made regarding more detailed warfighting scenarios and the ranking of scenarios. Consequently, the reliability of the services' munitions requirements remain uncertain and could adversely affect munitions planning, programming, budgeting, and industrial production base decisions. Until these issues are resolved and a revised Capabilities-Based Management Requirements instruction is issued, the accuracy of the munitions requirements will remain uncertain.

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## Recommendation for Executive Action

To ensure that additional actions are taken to improve the munitions requirements determination process we recommend that the Secretary of Defense direct the Under Secretary of Defense for Acquisition, Technology and Logistics to take the lead in establishing a plan for resolving outstanding issues. Such a plan should include time frames for resolving the outstanding issues, metrics for measuring progress, and milestones for implementing the proposed changes. Specific areas needing attention include

- completing target templates,
- publishing the updated munitions effectiveness data,
- resolving the issues involving the level of detail to include in the Defense Planning Guidance and whether to attach probability data to the warfighting scenarios,
- incorporating all improvements to the munitions requirement process in a revised Capabilities-Based Munitions Requirements instruction, and
- establishing a time frame for reassessing munitions requirements once all improvements have been implemented.

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## Agency Comments and Our Evaluation

The Director of Strategic and Tactical Systems in the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics provided written comments to our report, which are included in appendix III. The Department concurred with the report and outlined actions underway addressing all aspects of the report's recommendations such as resolving the issues involving the level of detail to include in the Defense Planning Guidance and whether to attach probability data to the warfighting scenarios, incorporating all improvements to the munitions requirement process in a revised Capabilities-Based Munitions Requirements

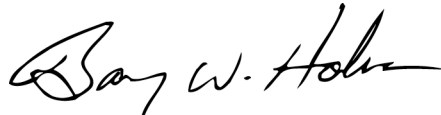
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instruction, and establishing a time frame for reassessing munitions requirements once all improvements have been made. The Department also provided technical comments, which we incorporated in the report as appropriate.

We are sending copies of this report to the appropriate congressional committees; the Honorable Donald H. Rumsfeld, Secretary of Defense; the Acting Secretary of the Army, Joseph W. Westphal; the Acting Secretary of the Air Force, Lawrence J. Delaney; the Acting Secretary of the Navy, Robert B. Pirie, Jr.; the Director, Office and Management and Budget, Mitchell E. Daniels, Jr.; and the Director, Defense Intelligence Agency, Vice Admiral Thomas R. Wilson.

Please contact me at (202) 512-8412 if you or your staff has any questions concerning this report. Major contributors to this report are listed in appendix IV.

Sincerely yours,

A handwritten signature in black ink, reading "Barry W. Holman". The signature is fluid and cursive, with the first name "Barry" being more prominent and the last name "Holman" following in a similar style.

Barry W. Holman, Director  
Defense Capabilities and Management

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# Appendix I: Scope and Methodology

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To assess the extent to which actions have been taken to improve the munition requirements determination process, we reviewed the Department's Instruction 3000.4, Capabilities-Based Munitions Requirements to ascertain roles and oversight responsibilities and to identify required inputs into the process. We reviewed the Defense Planning Guidance for fiscal years 2000-2005 and the update for fiscal years 2001-2005 to determine what instruction the Department provided to guide the services as they determine their munition requirements. To identify factors that affect the accuracy of the requirements determination process, we reviewed 20 Department of Defense Inspector General and GAO reports relating to the Department's munitions requirements determination process. We also reviewed the Joint Requirements Oversight Council memorandums to determine the focus of the Joint Staff's study on the impact of small-scale contingency operations on inventories of specific munitions. We met with service officials to determine how each service develops its munition requirements and obtained data on the assumptions and inputs that go into its simulation models. We also obtained information on how each service reviews the outcome of its munitions requirement process. In addition, we obtained information on the Commanders in Chief's Operating Plan, Integrated Priority List, and other planning data necessary to assist the services with their requirements planning.

To address those areas needing additional action, we met with Department and service officials to obtain their views on the impact of how the unresolved issues could affect the accuracy of the requirements determination process. In addition, we obtained documentation pertaining to the areas still needing action. We met with senior officials and performed work at the Offices of Secretary of Defense, Washington, D.C.; the Joint Chief of Staff, Washington, D.C.; and the Defense Intelligence Agency, Bolling Air Force Base, Washington, D.C. We also interviewed senior officials from Army Combat Support War Reserve Branch, Washington D.C.; Navy Requirements Planning, Naval Air Acquisition Program, and Naval Surface Fire Support, Washington, D.C.; Air Force Munitions Requirements Weapons Division, Crystal City, Virginia; U.S. Pacific Command, Honolulu, Hawaii; U.S. Central Command, McDill Air Force Base, Tampa, Florida; and U.S. Force Korea, Seoul, Korea. We performed our review from December 1999 through November 2000 in accordance with generally accepted government auditing standards.

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# Appendix II: Related DOD Inspector General and General Accounting Office Reports

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*Summary of the DOD Process for Developing Quantitative Munitions Requirements*, Department of Defense Inspector General, Feb. 24, 2000.

*Air Force Munitions Requirements*, Department of Defense Inspector General, Sept. 3, 1999.

*Defense Acquisitions: Reduced Threat Not Reflected in Antiarmor Weapon Acquisitions* ([GAO/NSIAD-99-105](#), July 22, 1999).

*U. S. Special Operations Command Munitions Requirements*, Department of Defense Inspector General, May 10, 1999.

*Marine Corps Quantitative Munitions Requirements Process*, Department of Defense Inspector General, Dec. 10, 1998.

*Weapons Acquisitions: Guided Weapon Plans Need to be Reassessed* ([GAO/NSIAD-99-32](#), Dec. 9, 1998).

*Navy Quantitative Requirements for Munitions*, Department of Defense Inspector General, Dec. 3, 1998.

*Army Quantitative Requirements for Munitions*, Department of Defense Inspector General, June 26, 1998.

*Management Oversight of the Capabilities-Based Munitions Requirements Process*, Department of Defense Inspector General, June 22, 1998.

*Threat Distributions for Requirements Planning at U.S. Central Command and U.S. Forces Korea*, Department of Defense Inspector General, May 20, 1998.

*Army's and Marine Corps' Quantitative Requirements for Blocks I and II Stinger Missiles*, Department of Defense Inspector General, June 25, 1996.

*U.S. Combat Air Power – Reassessing Plans to Modernize Interdiction Capabilities Could Save Billions*, Department of Defense Inspector General, May 13, 1996.

*Summary Report on the Audits of the Anti-Armor Weapon System and Associated Munitions*, Department of Defense Inspector General, June 29, 1995.

*Weapons Acquisition: Precision Guided Munitions in Inventory, Production, and Development* ([GAO/NSIAD-95-95](#), June 23, 1995).

*Acquisition Objectives for Antisubmarine Munitions and Requirements for Shallow Water Oceanography*, Department of Defense Inspector General, May 15, 1995.

*Army's Processes for Determining Quantitative Requirements for Anti-Armor Systems and Munitions*, Department of Defense Inspector General, March 29, 1995.

*The Marine Corps' Process for Determining Quantitative Requirements for Anti-Armor Munitions for Ground Forces*, Department of Defense Inspector General, Oct. 24, 1994.

*The Navy's Process for Determining Quantitative Requirements for Anti-Armor Munitions*, Department of Defense Inspector General, Oct. 11, 1994.

*The Air Force's Process for Determining Quantitative Requirements for Anti-Armor Munitions*, Department of Defense Inspector General, June 17, 1994.

*Coordination of Quantitative Requirements for Anti-Armor Munitions*, Department of Defense Inspector General, June 14, 1994.

# Appendix III: Comments From the Department of Defense



ACQUISITION AND  
TECHNOLOGY

## OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

20 MAR 2001

Mr. Barry W. Holman  
Director, Defense Capabilities and Management  
United States General Accounting Office  
Washington, D.C. 20548

Dear Mr. Holman:

This is the Department of Defense (DoD) response to the GAO draft report, "DEFENSE LOGISTICS: Unfinished Actions Limit Reliability of the Munitions Requirement Determination Process," dated February 8, 2001 (GAO Code 709458/OSD Case 3037).

The report recommends that the "Under Secretary of Defense (Acquisition, Technology and Logistics) take the lead in putting in place a plan for resolving issues." The Department's plan is currently in execution. GAO comments have already been incorporated into the revised DoD Instruction. Final approval of the instruction is expected this summer.

The Department agrees with all specific elements of the report's recommendation. Suggested technical changes for clarification and accuracy have been provided separately.

The Department appreciates the opportunity to comment on the draft report.

A handwritten signature in cursive script, reading "George R. Schneider".

George R. Schneider  
Director  
Strategic and Tactical Systems

Enclosure



GAO DRAFT REPORT DATED FEBRUARY 8, 2001  
(GAO CODE 709458) OSD CASE 3037

"DEFENSE LOGISTICS: UNFINISHED ACTIONS LIMIT RELIABILITY OF THE  
MUNITIONS REQUIREMENT DETERMINATION PROCESS"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION

**RECOMMENDATION:** The GAO recommended that the Secretary of Defense direct the Under Secretary of Defense for Acquisition, Technology and Logistics to take the lead in putting into place a plan for resolving outstanding issues. Such a plan should include timeframes for resolving the outstanding issues, metrics for measuring progress, and milestones for implementing the proposed changes. Specifically, areas needing attention include:

- completing target templates;
- publishing the updated munitions effectiveness data;
- resolving the issues involving the level of detail to include in the Defense Planning Guidance and whether to attach probability data to the war-fighting scenarios;
- incorporating all improvements to the munitions requirement process in a revised Capabilities-Based Munitions Requirements (CBMR) instruction; and
- establishing a time frame for reassessing munitions requirements once all improvements have been implemented. (p. 17/GAO Draft Report)

**DOD RESPONSE:** Concur. The Department's plan is currently in execution. GAO comments have already been incorporated into the revised DoD Instruction. Final approval of the instruction is expected this summer.

The Department has addressed and is implementing all specific "areas needing attention" contained in the recommendation.

The first specific area, "completing target templates," has been incorporated into the revised draft CBMR instruction for items (e.g., airfields, facilities, and command and control sites). For the second specific area, "publishing the updated munitions effectiveness data," the Department is currently working on updating and publishing these data. The third specific area, "resolving the issues involving the level of detail to include in the Defense Planning Guidance and whether to attach probability data to the war-fighting scenarios," will be addressed during this year's update of the Defense Planning Guidance. The fourth specific area, "incorporating all improvements to the munitions requirement process in a revised Capabilities-Based Munitions Requirements instruction," is currently in process. For the final specific area, "establishing a time frame for reassessing munitions requirements once all improvements have been implemented," the CBMR working group is a standing group that currently meets, as required, to address the evolving needs of the Department's munitions requirements generation process. However, based on the recommendation, the CBMR working group will now meet at least once a year (following Service Program Objective Memoranda submissions) to assess the adequacy of the CBMR process. Any process improvements will be identified and implemented.



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# Appendix IV: GAO Contacts and Staff Acknowledgment

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## GAO Contacts

Ronald Berteotti (214) 777-5702  
Patricia J. Nichol (214) 777-5665

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## Acknowledgment

In addition to those named above, Patricia Sari-Spear made key contributions to this report.



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